THE CLAIMS

1-77. (Previously Canceled).

78. (Previously Presented) A method comprising:

receiving at a headend control computer, via an uplink channel, one or more upstream messages from one or more consumer premise equipment (CPE) units and sending from the headend control computer, via a downlink channel, one or more downstream messages to the one or more of the CPE units;

receiving one or more transmission time interval requests via the uplink channel at the headend control computer from one or more of the CPE units;

collecting the received requests for transmission time intervals on the uplink channel in a database and arranging at least some of the received interval requests in a request queue update message at the headend control computer; and

sending the request queue update message via the downlink channel to at least some of the CPE units and processing the request queue update message to update a master request queue in the headend control computer.

79. (Previously Presented) The method according to claim 78, wherein the upstream and/or downstream messages include one or more service messages having service data and at least one control messages used to manage and/or regulate network functions.

80. (Previously Presented) The method according to claim 79, further including an uplink Aloha slot burst interval serving to provide a plurality of message requests received from one or more of the CPE units, said burst interval being scheduled by the headend control computer.

81. (Previously Presented) The method according to claim 80, further including receiving at the headend control computer a control message from one or more of the CPE units.

82. (Previously Presented) The method of claim 80, further including receiving service and control messages from one or more of the CPE units at the headend control computer in response to an assigned time slot.

83. (Previously Presented) The method according to claim 82, further including receiving at the headend control computer the service messages from one or more of the CPE units and in turn distributing them to the provider control subsystems and to headend network control circuitry.

84. (Previously Presented) The method according to claim 78, further including providing time division multiple access on the uplink or downlink channels.

85. (Previously Presented) The method according to claim 78, further including modulating, transmitting, acquiring, tracking and demodulating signals on the uplink and downlink channels.

86. (Previously Presented) The method according to claim 78, further including tracking the phase of a master system clock via a local clock.

87. (Previously Presented) The method according to claim 86, further including locking the uplink channel to the downlink channel for clock synchronization.

88. (Previously Presented) The method according to claim 86, further including acquiring and tracking interval boundaries on the downlink channel.

89. (Previously Presented) The method according to claim 78, wherein one or more of the messages are carried in intervals, and at least one message includes a message header.

90. (Previously Presented) The method according to claim 78, further including organizing and transmitting control messages.

91. (Previously Presented) The method according to claim 78, further including providing message transmit queues and message receive queues in the headend control computer.

92. (Previously Presented) The method according to claim 78, further including providing at least one request queue at the headend control computer..

93. (Previously Presented) The method according to claim 78, further including providing a synchronization of the downlink channel.

94. (Previously Presented) The method according to claim 78, further including demodulating and decoding uplink messages.

95. (Previously Presented) The method according to claim 78, further including providing a receive router at the headend computer control for monitoring the received messages and routing the received messages in accordance with an associated request.

96. (Previously Presented) The method according to claim 78, further including providing a transmission schedulers at the headend computer control for affecting transmission of messages.

97. (Previously Presented) The method according to claim 96, further including regulating a length and frequency of a transmitted messages in accordance with a range-of values by the transmission scheduler.

98. (Previously Presented) The method according to claim 80, further including collecting requests in a pools and forming the request queue update message.

99. (Previously Presented) The method according to claim 98, further including receiving requests update messages and placing the messages contained therein in a request queue under the control of an insertion algorithm.

100. (Previously Presented) The method according to claim 78, further including determining an order of upstream message transmission based on one or more characteristics of the upstream message.

101. (Previously Presented) The method according to claim 78, further including generating a requests for an Aloha slot burst intervals by means of an Aloha slot supply algorithm in the headend control computer.

102. (Previously Presented) A headend unit, comprising:

a receiver coupled to the headend control computer configured to receive one or more upstream messages from one or more CPE units and a transmitter coupled to the headend computer configured to send one or more downstream messages to the CPE units; and

a database configured to store received requests for transmission time intervals on the an uplink channel in a database, at least some requests from the database being arranged in a request queue update message at the headend control computer; wherein the headend control computer is configured to receive transmission time interval requests from the CPE units configured to send a request queue update message to at least some of the CPE units, and to process the request queue update message to update a master request queue in the headend control computer.

103. (Previously Presented) The headend unit according to claim 102, wherein the messages include service messages bearing data and control messages in the form of request messages.

104. (Previously Presented) The headend unit according to claim 102, wherein the headend computer is coupled to a group of service interface modules.

105. (Previously Presented) The headend unit according to claim 102, further configured to schedule a burst interval on the uplink channel.